

Remarks/Arguments:

The pending claims are 1, 3-13, 15-17, 19-22. Claims 2, 14, and 18 have been canceled. Claims 1, 3, 13, 15, 17, and 19 have been amended. Claims 21-22 have been added. No new matter has been introduced therein.

Claims 1, 13, and 17 have been rejected under 35 U.S.C. § 102(b) as anticipated by Huang et al. (U.S. Patent No. 5,829,000). The amendments to paragraphs (a) and (b) of claim 1 are supported by page 3, line 22 to page 4, line 14 and page 7, line 2 to page 8, line 9 of the specification. The amendments to the "whereby" clause following paragraph (d) in claim 1 is supported at least by page 3, line 22 to page 4, line 14 and page 12, lines 6-16 of the specification. Similar amendments to claims 13 and 17 are likewise supported by the specification.

Amended claim 1, for example, recites, in part:

- (a) . . .inputting a sentence by utterance;
- (b) . . .determining candidates of word-strings which consist of one or more words of the inputted utterance by speech recognition processing;
- (c) . . .displaying the candidates;
- (d) . . .selecting the displayed candidate by a user

whereby, the inputted utterance is recognized by which said candidate determining step (b), said displaying step (c) and said selecting step (d) are repeated in order on a unit of the word-string from a beginning of the inputted utterance.

In applicants' invention as recited in claims 1, 13, and 17, a sentence is inputted and word strings comprising one or more words of the inputted sentence are determined. Each of

the word strings are repeatedly processed in order of the word-string units. The determination is performed by speech recognition processing. The word candidate results of the speech recognition processing are displayed. The user then selects the desired displayed candidate. That is, in the present invention, the whole sentence inputted by the utterance is not recognized as a whole unit. Only the word-string unit is recognized and displayed for selection by the user. Consequently, the capacity for storing the utterance recognition can be reduced, thereby allowing the apparatus to be a smaller size.

In contrast, in Huang '000, the whole inputted utterance is recognized and the utterance is displayed with word candidates. Then, the user determines whether or not the sentence is correct. The user selects and displays an uncertain word within the entire sentence and selects the proper word substitute. The user determines the amount of speech in the window. (col. 4, lines 6-8; col. 7, lines 14-16). This is different than the present invention where step (b) recites that the step of determining candidates is performed by speech recognition processing. It is also different from step (c) which recites that the inputted utterance is recognized "in order on a unit of the word-string from a beginning of the inputted sentence." Because of the way that Huang '000 performs its processing, its apparatus requires more storage capacity.

For the above reasons, amended claims 1, 13 and 17 are not subject to rejection under 35 U.S.C. § 102(b) as anticipated by Huang '000.

Claims 2-12, 14-16, and 18-20 have been rejected under 35 U.S.C. § 103(a) as unpatentable over Huang '000 in view of Huang et al. (U.S. Patent No. 5,937,384).

Claim 2 has been canceled and replaced with new claim 21. Claim 21 depends from amended claim 1. New claim 22 depends from claims 1 or 21. As discussed above, Huang '000 does not disclose all of the features of amended claim 1. Huang '384 also does not disclose or suggest all of the features of amended claim 1. Instead, Huang '384 is directed to a computer speech recognition system that utilizes continuous density hidden Markov models by weighing different output probabilities representing the same phonetic unit relative to the degree to which each output probability can predict unseen data." (col. 1, lines 6-9; col. 3, lines 37-43). Rather than "determining candidates of word-strings which consist of one or more words by speech recognition processing" recited in step (b), Huang '384 converts analog speech

into digital signals. The system extracts features from the digital signals and works on the extracted features. Even if Huang '000 and Huang '384 were combined, amended claim 1 would not be subject to rejection under 35 U.S.C. § 103(a) as unpatentable over Huang '000 in view of Huang '384 because the combined references do not disclose or suggest all of the features in amended claim 1. Accordingly, neither amended claim 1, nor dependent claims 21 and 22, are subject to rejection under 35 U.S.C. § 103(a) as unpatentable over Huang '000 in view of Huang '384. Since claims 3 and 4 also depend from amended claim 1, they are also not subject to the same rejection.

The rejection of claim 5 is traversed. Claim 5 recites, in part,

a word-string preparing section for preparing a word-string candidate based on one to several words from the extracted feature amount and the word candidate by using at least any one of a language model and an acoustic model.

The Office Action contends that this feature is disclosed by column 6, lines 1-52 of Huang '000. Applicants disagree. The cited part of Huang '000 discloses only the fact that word-string candidates are prepared and explains a method of how a user can work with the candidates to produce a correct sentence. The cited part of Huang '000 does not disclose an apparatus that is used to perform the correction. More specifically, the cited part of Huang '000 does not disclose an apparatus that prepares the word-string candidate based on "words from the extracted feature amount" and based on "the word candidate" as recited in claim 5. The Office Action concedes that Huang '000 does not disclose a section that creates the "extracted feature amount." Even if Huang '384 (allegedly disclosing a section for extracting a feature amount) were combined with Huang '000, there is no disclosure in either of the Huang references that the alleged extracted feature amount should or could provide one of the inputs to a word-string preparing section.

Referring only generally to Figure 2 of Huang '384, the Office Action contends that Huang '384 discloses an utterance pre-processing section for extracting a feature amount of an utterance of from the input section. However, Figure 2 of Huang '384 is a flow diagram of a training method used in the system of Figure 1. (col. 3, lines 15-16). Figure 1 is a block diagram of a speech recognition system. (col. 3, lines 13-14). Although Figure 1 of Huang '384

illustrates a number of sub-systems, none of the subsystems is identified as an utterance pre-processing section. Furthermore, the Office Action has not identified anything in Figure 1 that purportedly discloses such an utterance pre-processing section. The Office Action has also not identified anything in Figure 1 of Huang '384 that discloses or suggests the combination of such an utterance pre-processing section with the word-string preparing section that is also recited in claim 5.

Accordingly, claim 5 is not subject to rejection under 35 U.S.C. § 103(a) as unpatentable over Huang '000 in view of Huang '384. Since claims 6-12 depend from claim 5, they are also not subject to the same rejection.

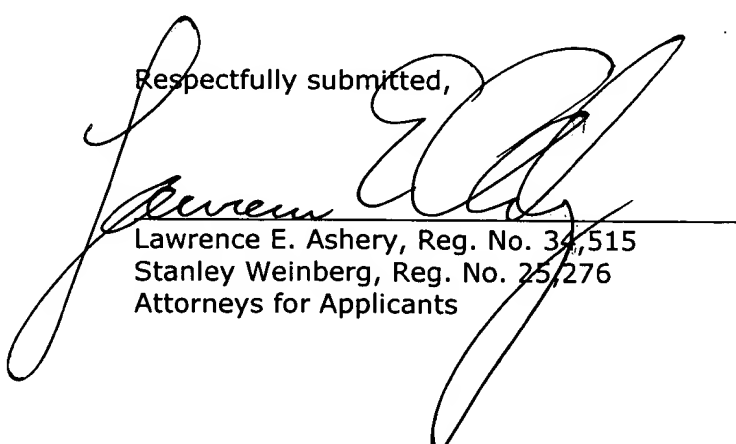
Since claims 14 and 18 have been canceled, their rejections are moot.

Claim 15 has been amended so that it now depends from amended claim 13. Claim 16 depends from amended claim 15. For the reasons discussed above regarding amended claim 1, the combination of Huang '000 and Huang '384 does not disclose or suggest all of the features of amended claim 13. Accordingly, claims 13, 15, and 16 are not subject to rejection under 35 U.S.C. § 103(a) as unpatentable over Huang '000 in view of Huang '384.

Claims 19 and 20 depend from amended claim 17. For the reasons discussed above, claims 17, 19, and 20 are not subject to rejection under 35 U.S.C. § 103(a) as unpatentable over Huang '000 in view of Huang '384.

For all of the above reasons, applicants solicit allowance of claims 1, 3, 13, 15-17, 19-21.

Respectfully submitted,



Lawrence E. Ashery, Reg. No. 34,515
Stanley Weinberg, Reg. No. 25,276
Attorneys for Applicants

LEA/SW/dmw
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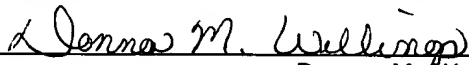
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P.O. Box 980
Valley Forge, PA 19482
(610) 407-0700

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